

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: PROFILE LAKE	Lake Area (ha):	5.99
Town: FRANCONIA	Maximum depth (m):	4.9
County: Grafton	Mean depth (m):	2.4
River Basin: Merrimack	Volume (m ³):	144500
Latitude: 44°10' N	Relative depth:	1.8
Longitude: 71°41' W	Shore configuration:	1.27
Elevation (ft): 1925	Areal water load (m/yr):	45.15
Shore length (m): 1100	Flushing rate (yr ⁻¹):	18.70
Watershed area (ha): 304.4	P retention coeff.:	0.37
% watershed ponded: 0.1	Lake type:	natural w/dam

BIOLOGICAL:

	13 January 1987	9 July 1986
DOM. PHYTOPLANKTON (% TOTAL) #1	DINOBRYON 50%	PERIDINIUM 30%
#2	UROGLENOPSIS 35%	TINY PENNATE SPP. 25%
#3	ASTERIONELLA 14%	DINOBRYON 20%
PHYTOPLANKTON ABUNDANCE (cells/mL)		345.0
CHLOROPHYLL-A (µg/L)		1.47
DOM. ZOOPLANKTON (% TOTAL) #1	KERATELLA 65%	NAUPLIUS LARVAE 35%
#2	POLYARTHRA 16%	CALANOID COPEPODS 35%
#3	SYNCHAETA 14%	KELICOTTIA 29%
ROTIFERS/LITER	529	9
MICROCRUSTACEA/LITER		22
ZOOPLANKTON ABUNDANCE (#/L)	529	31
VASCULAR PLANT ABUNDANCE		Sparse
SECCHI DISK TRANSPARENCY (m)		3.5
BOTTOM DISSOLVED OXYGEN (mg/L)	8.3	6.8
BACTERIA (fecal col., #/100 ml) #1		10
#2		< 10
#3		

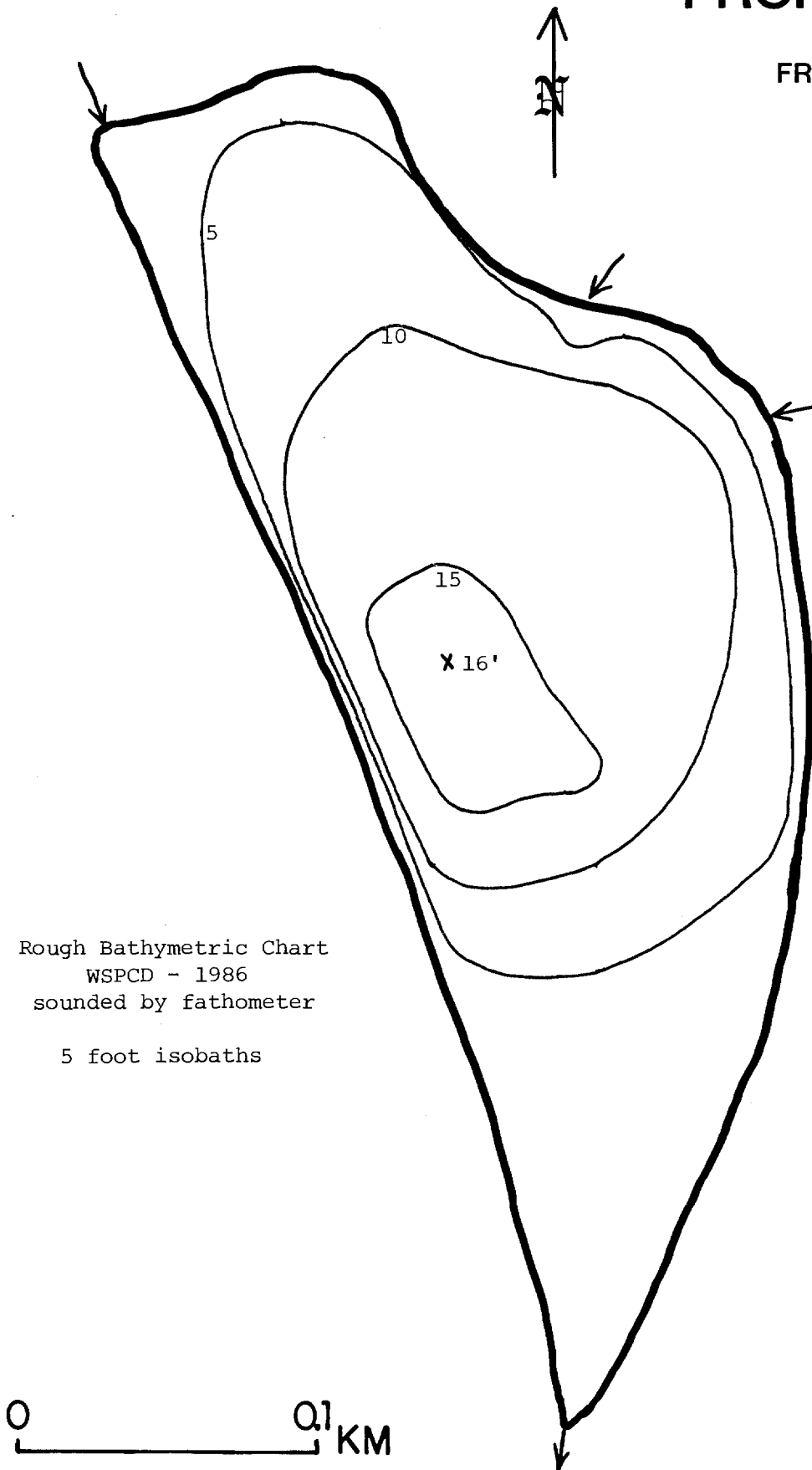
SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 2.8
Hypolimnion volume (m³): 21000

PROFILE LAKE

FRANCONIA



Rough Bathymetric Chart
WSPCD - 1986
sounded by fathometer

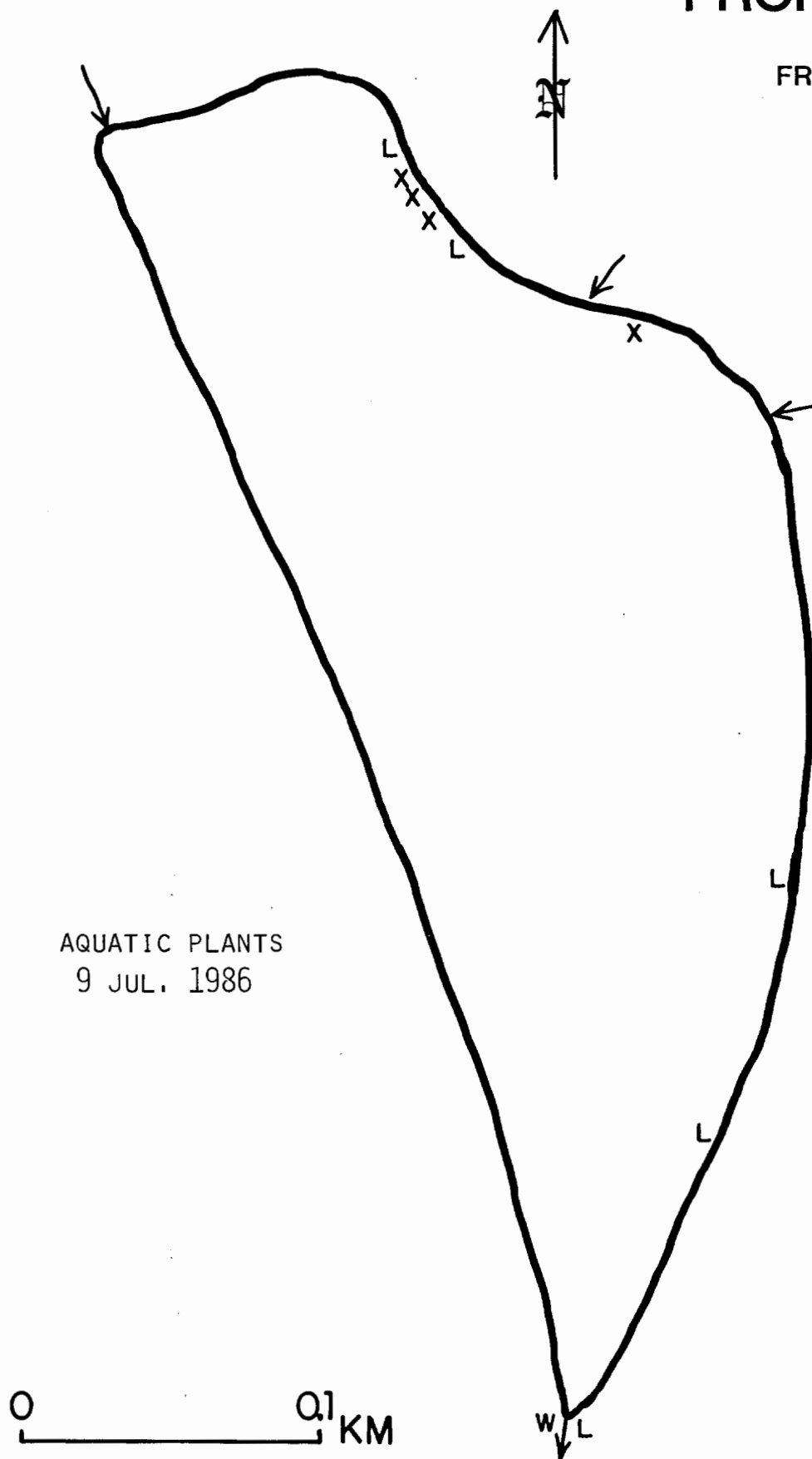
5 foot isobaths

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*Dissolved oxygen values are in mg/L

PROFILE LAKE

FRANCONIA



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